

Claims

1. A milking device operable in a milking state and a cleaning state, the device including:

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a milk-transporting member (1), which includes at least one teatcup (2) to be attached to a teat of an animal to be milked and is arranged to permit the transporting of milk from the teat to a milk-collecting member (4) during the milking state, wherein the milk-transporting member (1) is connectable to a relatively low pressure (5) for achieving said transporting by sucking milk from the teat to the milk-collecting member (4) via the milk-transporting member (1) during the milking state; and

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a gas conduit (11) for the introduction of a gas into the milk-transporting member (1) during the milking state in order to enhance said transporting of milk, wherein the gas conduit (11) has a first end (12) connected to the milk-transporting member (1) and, includes a gas inlet member (15) for the introduction of said gas into the gas conduit (11),

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characterised in that the gas conduit (11), beyond the gas inlet member (15), has a second end (13) which is connectable to a relatively low pressure (5) for permitting a flow of a cleaning fluid from the milk-transporting member (1) through the gas conduit (11) during the cleaning state.

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2. A milking device according to claim 1, characterised in that the gas inlet member (15) includes an opening, which communicates with a relatively high pressure that is higher than said relatively low pressure.

3. A milking device according to claim 2, characterised in that said relatively high pressure is formed by the surrounding environment (E).

5 4. A milking device according to any one of the preceding claims, characterised in that the gas inlet member (15) is provided at a distance from the first end and the milk-transporting member (1).

10 5. A milking device according to any one of the preceding claims, characterised in that the relatively low pressure to the milk-transporting member (1) and the relatively low pressure to the gas conduit are provided by at least one vacuum pump (5).

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6. A milking device according to claim 5, characterised in that the vacuum pump is connected to the milk-collecting member (4) via a vacuum conduit (6).

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7. A milking device according to any one of the preceding claims, characterised in that the device includes a cleaning device (19) arranged to deliver the cleaning fluid to the teatcup (2) for permitting said flow through the gas conduit (11) during the cleaning state.

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8. A milking device according to claim 7, characterised in that the cleaning device (19) is arranged to deliver the cleaning fluid to the teatcup (2) for permitting said flow to the milk-collecting member (4).

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9. A milking device according to claim 8, characterised in that the cleaning device (19) is arranged to deliver the cleaning fluid to the teatcup (2) for permitting said flow through the milk-transporting member (1).

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10. A milking device according to any one of claims 7 to 9, characterised in that the cleaning device (19) includes a cleaning nozzle (22) to be introduced into the teatcup (2), and a supply unit (21) for supplying the cleaning fluid to  
5 the cleaning nozzle (22) for said delivery of the cleaning fluid.

11. A milking device according to any one of the preceding claims, characterised in that the gas conduit (11) includes a valve (18) arranged between the gas inlet member and the second end (13), wherein the valve (18) is adapted to be closed during the milking state and to be open during at least a part of the cleaning state.  
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15 12. A milking device according to any one of the preceding claims, characterised in that the first end (12) of the gas conduit (11) is connected to the teatcup (2).

20 13. A milking device according to any one of the preceding claims, characterised in that the milk-transporting member (1) also includes at least one milk hose (3), wherein the first end (12) of the gas conduit (11) is connected to the milk hose (3).

25 14. A milking device according to any one of the preceding claims, characterised in that the milk-transporting member (1) also includes a claw (30), wherein the first end (12) of the gas conduit (11) is connected to the claw (30).

30 15. A method of handling a milking device, including at least one milk-transporting member including at least one teatcup, during a milking state and a cleaning state, the method including the steps of:

35 attaching the teatcup of the milk-transporting member to a teat of an animal to be milked,

transporting milk during the milking state from the teat to a milk-collecting member by sucking milk to the milk-collecting member via the teatcup and the milk-transporting member by applying a relatively low pressure to the milk-transporting member; and

10 supplying a gas into the milk-transporting member via a gas conduit in order to permit said transporting of milk, wherein the gas conduit has a first end which is connected to the milk-transporting member and includes a gas inlet member for the introduction of said gas into the gas conduit,

15 characterised by the further step of supplying a cleaning fluid from the milk-transporting member through the gas conduit during the cleaning state by applying a relatively low pressure to the gas conduit at a second end of the gas conduit beyond the gas inlet member.

20 16. A method according to claim 15, characterised by the further step of communicating the gas inlet member via an opening with a relatively high pressure that is higher than said relatively low pressure.

25 17. A method according to claim 16, wherein said high pressure is formed by the surrounding environment.

30 18. A method according to any one of claims 15 to 17, characterised by the further step of delivering the cleaning fluid by means of a cleaning device to the teatcup for permitting said flow through the gas conduit during the cleaning state.

19. A method according to claim 18, characterised by the further step of delivering the cleaning fluid to the teatcup (2) for permitting said flow to the milk-collecting member.

5 20. A method according to claim 19, characterised by the further step of delivering the cleaning fluid to the teatcup (2) for permitting said flow through the milk-transporting member to the milk-collecting member.

10 21. A method according to any one of claims 15 to 20, wherein the gas conduit includes a valve arranged between the gas inlet member and the second end, the method including the further steps of:  
closing the valve during the milking state and  
15 opening the valve during at least a part of the cleaning state.

22. A method according to any one of claims 15 to 21, wherein the cleaning device includes a cleaning nozzle (22) 20 to be introduced into the teatcup (2), and a supply unit (21), characterised by the further steps of:  
supplying said cleaning fluid by means of the supply unit to a cleaning nozzle, and  
delivering said fluid into the teatcup by means of the 25 cleaning nozzle.